2005-2007 Puget Sound Conservation and Recovery Plan

Draft for Review and Approval by Puget Sound Action Team

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Puget Sound Action Team Partnership

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Introduction

The Puget Sound Action Team (Action Team), created in law in 1996, is the state's partnership for Puget Sound, charged with defining, coordinating and putting into action the state's environmental protection and restoration agenda for the Sound. The Action Team partnership is made up of state agencies and federal, tribal and local government representatives. The Puget Sound Council, which advises the Action Team, is composed of diverse interest groups, state legislators and tribal and local government representatives.

The Action Team partnership has adopted this *2005-2007 Puget Sound Conservation and Recovery Plan* as the strategic framework for the 2005-2007 biennium. The Action Team looked across the spectrum of issues that threaten the health of Puget Sound and then set priorities to guide the partnership's work in the Sound. This document identifies those priorities and the specific results the partnership will work to achieve in 2005-2007. It also should help to coordinate work and activities among agencies on each priority. The appendix presents specific activities and budget proposals for the Action Team state agency and university partners for the 2005-2007 biennium. The 2005-2007 *Puget Sound Conservation and Recovery Plan* will be submitted to the governor and then the state legislature as they develop and approve the final state budget for Puget Sound.

The *2005-2007 Puget Sound Conservation and Recovery Plan* is the Action Team's fifth biennial work plan to implement the *Puget Sound Water Quality Management Plan*, a long-term comprehensive plan adopted by the state and federal governments to protect and restore Puget Sound.

Priorities, Strategies and Results

The Action Team partnership has identified the following issues as the most important priorities for its work together in Puget Sound, but ***has not ranked any priority over the others in importance***:

- Clean up contaminated sites and sediments.
- Reduce continuing toxic contamination and prevent future contamination.
- Reduce the harmful impacts from stormwater runoff.
- Prevent nutrient and pathogen pollution caused by human and animal wastes.
- Protect shorelines and other critical areas that provide important ecological functions.
- Restore degraded nearshore and freshwater habitats.
- Conserve and recover orca, salmon, forage fish and groundfish.

Each Puget Sound priority builds on the foundation of best available scientific knowledge about environmental conditions and management strategies. Studies by scientists from numerous federal, state, local and tribal governments, as well as universities, colleges, environmental organizations and citizen groups have provided information about the condition of the Puget Sound ecosystem and the impact of human activities.

This work plan presents strategies and results for each priority for the 2005-2007 biennium. In developing strategies, the Action Team partnership seeks an appropriate balance of research, technical assistance, regulation, education and public involvement, enforcement, funding, and demonstration projects that will deliver progress on each priority. The strategies and desired results presented in this document reflect the thinking of Action Team partners, resource managers at all levels of government and other interested parties about how to translate the findings of the relevant scientific studies into policies and programs. As described in the discussion of the Role of Science (page 27) research and monitoring in the 2005-2007 biennium will allow us to evaluate the effectiveness of efforts to curb and reverse the harmful impacts of people's activities in the Puget Sound ecosystem.

The priorities and results in this work plan apply to local, federal, tribal and other partners in Puget Sound, and the Action Team and Council encourage all partners to use them as a focus for coordinated efforts. The desired results identified in this document for each priority emphasize the work of state agency and university education partners because the work plan's primary function is as a state budget document. The Action Team partnership recognizes that this emphasis does not adequately reflect the significant contributions of local, federal, tribal and private partners toward progress in protecting and restoring Puget Sound.

Developing the *2005-2007 Puget Sound Conservation and Recovery Plan*

The plan reflects public input, is consistent with and built around agency strategic plans and budget proposals, and offers a coordinated approach for achieving measurable progress on the highest priorities for Puget Sound.

The Action Team partnership issued a draft of the *2005-2007 Puget Sound Priorities* for a public comment period in February and March of 2004. Comments from members of the public and state, federal, tribal and local governments generated a number of improvements in the document, large and small. Agencies and university environmental education partners then used the priorities to develop their agency activities and budgets during the summer of 2004. Although broader agency responsibilities, legal mandates, and budget constraints help shape agency planning, the Action Team partnership agencies are coordinating and focusing their work in Puget Sound around the results detailed in this document. Action Team partner agencies provided target numbers, where appropriate, for the results, as well as detailed information on activities and budgets they propose to achieve those results. An appendix of budget detail (pages 1-A to 56-A) provides links between agency activities, proposed work plan budgets, and results under the priorities.

Washington State's newly adopted budget process, the Priorities of Government, will consider the *2005-2007 Puget Sound Conservation and Recovery Plan* in planning the 2005-2007 state government budget. As the governor and the legislature work together in the winter of 2005 to decide where to invest limited state resources, the Action Team

partnership's biennial plan will provide guidance on where to direct resources to benefit Puget Sound.

SIDEBAR: Public Input on Prevention and Restoration

During the February-March 2004 public review of the *2005-2007 Puget Sound Priorities*, the Action Team partners asked the public to comment on the relative importance of the seven priorities, which the Action Team has not ranked. While most reviewers recognized that both prevention and restoration play a role in protecting the Puget Sound ecosystem for future generations, a number of comments specifically highlighted the importance and benefits of prevention.

Reviewers supported preventive actions for several reasons, including cost-effectiveness and the fact that protecting an existing area generally results in more ecological benefits than replacing or rebuilding its functions after they are altered or destroyed. Some reviewers pointed out that prevention requires public education and involvement that builds community stewardship for long-term protection. In addition, preventing damage to habitat and cultural resources is important because the damage is often irreversible.

Government leaders understand that prevention is a preferred approach, but often they are forced to put resources toward identified problems because of immediate, critical impacts or legal mandates. There are also concerns expressed by members of the public about environmental regulations that affect people's rights to develop lands. These dynamics limit funding for preventive programs such as public education, regulatory enforcement and compliance, and monitoring to detect and correct problems in their early stages.

A number of the Action Team partnership's priorities overlap with each other. Reducing stormwater pollution prevents toxic pollution of water, sediments and marine life. Cleaning up contaminated sediments prevents toxic substances from entering the food chain. Restoring natural processes together with regulating and acquiring sensitive lands improve the ecological functions that reduce pollution and protect the habitats of species at risk.

Input from the public in support of preventing pollution and protecting existing habitat is a helpful reminder from citizens that the state should continue to value this type of investment in Puget Sound's future.

The Role of the Action Team Partnership for 2005-2007

Long-term goal: Provide the state's institutional framework to lead and coordinate the protection and restoration of Puget Sound.

In response to the challenges facing Puget Sound, the Washington State Legislature in 1996 created the Puget Sound Action Team as the successor to the Puget Sound Water Quality Authority, to work as the state's partnership to protect and restore Puget Sound and its spectacular diversity of life, now and for future generations. The Action Team partnership organizes its work around three goals:

1. Protect and restore Puget Sound's water quality.
2. Protect and restore habitat for all native species in Puget Sound.
3. Protect the biological resources of Puget Sound and recover species at risk, including orcas, salmon and marine fish.

The Action Team partnership works to define, coordinate and implement the state's environmental agenda for Puget Sound. The partnership is made up of three interrelated entities. The Action Team is a 17-member governing body that includes directors from 10 state agencies, representatives from three federal agencies, one representative of tribal governments, two representatives of local governments (city and county), and a chairperson appointed by the governor. The Puget Sound Council provides guidance to the Action Team and reviews its progress, and is made up of seven representatives of leading Puget Sound interests, including tribal governments, counties, cities, agriculture, the environmental community, the shellfish industry and the business community, four representatives of the Washington State Legislature, and the chairperson of the Action Team. The Puget Sound Action Team staff provides professional and technical services to help the partner agencies and others in their efforts to protect, restore and sustain Puget Sound.

The Puget Sound Action Team partnership works on a wide range of activities to protect and restore Puget Sound. Areas of work include coordinating conservation plans, delivering conservation and recovery services, involving and informing Puget Sound residents, developing policy initiatives, conducting research and monitoring, and providing information for conservation.

Strategies for the Puget Sound Action Team Partnership, Puget Sound Council and Action Team Staff for 2005-2007

1. Define, coordinate, and implement the state's environmental protection and restoration agenda for Puget Sound.
2. Bring interagency and intergovernmental strategic thinking, communication and action to bear on Puget Sound's existing and emerging conservation needs. Choose between and develop specific strategies and courses of action, evaluate effectiveness of those strategies and actions, and build upon success.
3. Engage and involve Puget Sound local and tribal governments, state agencies, organizations and citizens in efforts to protect and restore Puget Sound through a variety of outreach projects, programs and education efforts.

Desired Results for the Puget Sound Action Team Partnership, Puget Sound Council, and Action Team Staff for 2005-2007

A. Puget Sound Action Team Partnership
   1. Activities are well managed and successfully implemented to achieve measurable and meaningful progress on priorities in the 2005-2007 Puget Sound Conservation and Recovery Plan.
   2. A report on the Action Team Partnership's progress in implementing the 2005-*2007 Puget Sound Conservation and Recovery Plan* is submitted to the governor, the legislature and the public by December 2006.
   3. Priorities are adopted for Puget Sound for the 2007-2009 biennium and, with the advice of the Puget Sound Council, a Puget Sound work plan and proposed budget for the 2007-2009 biennium is prepared, approved and submitted to the governor and the legislature.

B. Puget Sound Council
   1. The Puget Sound Council assesses the work of the Partnership on a continuous basis and makes recommendations for improvements and new areas and ways of engagement.
   2. The Council actively creates linkages to the key constituencies represented on the Council to improve collaboration and partnership opportunities and to improve information flow and communication in all directions.

C. Puget Sound Action Team Staff
   1. Action Team staff functions as an effective advocate for Puget Sound and its existing and emerging conservation needs.
   2. Outreach, technical assistance and funding for public involvement and education (PIE) projects are provided to local and tribal governments, businesses, trade associations, environmental and community groups, and interested individuals and organizations. PIE projects will reach 65,000 (50,000 without the proposed enhancement) citizens with education directed at behavior change and to raise awareness around priorities in the 2005-2007 Puget Sound Work Plan.
   3. The Puget Sound community is provided with accurate, relevant and accessible information on the status of the Puget Sound ecosystem, issues related to the health of the ecosystem, and activities of the Puget Sound Action Team partnership and Council.
   4. Action Team staff monitor current and emerging conservation and environmental issues in Puget Sound, track and participate in significant policy and program development in Puget Sound, seek and promote practical solutions to environmental problems, and work to find alternatives to activities and projects that may harm Puget Sound's marine and freshwater environment.
   5. Action Team staff support and coordinate the work of the Puget Sound Action Team partnership and the Puget Sound Council.

SIDEBAR: Public Education and Involvement Supports all Priorities

Involving and educating the people who live, work, do business and recreate around Puget Sound in efforts to protect and restore this region's ecosystems is critical to achieving the results in this work plan. For each of the priorities described in this plan, thousands of Puget Sound residents are actively working to protect and restore resources, educate their neighbors and effect positive changes in businesses, other institutions, and in local, state, tribal and federal government.

The *Puget Sound Conservation and Recovery Plan* relies on a diversity of public involvement and education programs. Examples include:

- Washington Sea Grant Program and Washington State University Extension fund water quality field agents in five Puget Sound counties;
- Washington Sea Grant and State Parks educate boaters about clean boating practices and work with marinas and others to prevent small oil spills;
- Department of Ecology supports education and involvement opportunities through water cleanup plans, watershed planning, and nonpoint pollution, stormwater and shoreline programs;
- Department of Fish and Wildlife and the Interagency Committee for Outdoor Recreation support volunteer habitat restoration projects;
- Department of Health educates the public on shellfish protection and on-site sewage system maintenance;
- Department of Natural Resources involves the public in processes to designate and manage aquatic reserves;
- Department of Agriculture educates and assists residents in managing pesticides and reducing invasive species to protect habitat and water quality;
- Conservation Districts integrate education into their work with rural residents to improve land management;
- Department of Community, Trade and Economic Development holds workshops and develops resource materials for local citizens, elected officials, and local planners;
- Public Involvement and Education (PIE) program administered by Puget Sound Action Team staff funds community-based education programs;
- Action Team staff outreach, communications and technical staff provide resources and work to educate and involve the public in all Puget Sound counties.

While public education is not listed in this document as one of the core priorities of the Action Team partnership, the partners agree that progress on each core priority depends on increased education and public involvement to build public support for changing individual and institutional behaviors and to expand a stewardship ethic throughout Puget Sound.

PRIORITY 1: Clean Up Contaminated Sites and Sediments

Long-term goal: All sediments exceeding state standards for contamination are cleaned up.

Many persistent toxic chemicals that are discharged to Puget Sound, such as polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), dioxins and mercury, tend to bind to sediments at concentrations far above natural conditions. They tend to accumulate in living tissues and can build up in the food web, resulting in toxicity.

Although some present day activities continue to release these chemicals, current pollution control practices are far better than practices before existing environmental laws came into force. The wastes from 100 years of uncontrolled or poorly controlled dumping and discharges were left in hundreds of upland, groundwater and sediment sites in the Puget Sound basin.

In 1988, agencies in Puget Sound completed the Puget Sound Dredged Disposal Analysis and adopted comprehensive testing requirements and limits on dredged material allowed for disposal at unconfined open water sites. Washington State passed the Model Toxics Control Act (MTCA), the state's contaminated site cleanup law, in 1989. The Department of Ecology (Ecology) adopted comprehensive sediment management standards for Puget Sound in 1991.

Today, large portions of Puget Sound's 1.8 million acres of submerged land sediments show some form of chemical or biological degradation. As of July 2003, Ecology has identified more than 5,700 acres as contaminated because they exceed the Washington State sediment management standards. Ecology and the Environmental Protection Agency (EPA) have scheduled 2,874 of those acres in about 110 sites for remediation because they exceed cleanup triggers. The remaining contaminated acreage may naturally recover without remediation if the sources of contamination are controlled. Ecology continues to assess in-water sediments for contamination. From July 2003 to June 2004 Ecology evaluated over 4,500 acres of sediment for source control, cleanup or constructive purposes.

Contaminated underwater sedim sites occur primarily in the Sound's major urban bays, including Commencement, Elliott, and Bellingham bays, Sinclair Inlet, and other water bodies with extensive histories of industrial activities. The contaminated sites on land are widely scattered, as were the storage facilities, dry cleaners, creosote plants and other activities that caused the contamination.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Continue to remediate the identified clean up sites.
2. Manage navigation dredging operations to clean up contaminated areas whenever possible and prevent contamination of unconfined disposal sites.

Desired Results for Clean Up of Contaminated Sites and Sediments in 2005-2007

A. Sites are cleaned up
   1. The total number of acres of contaminated sediments that are remediated under the authority of Ecology increases by 80 acres. This represents 2.8 percent of the acres scheduled for cleanup as of July 2003, the same pace of cleanup targeted for the 2003-2005 biennium.
   2. Number of upland site cleanups completed through Superfund and Model Toxics Control Act (MTCA) increases by 760 sites. This represents at least 8 percent of known number of cleanup actions.
   3. Completed two (2) corrective actions at state High Priority Hazardous Waste Facilities increases. This represents 10 percent of state high priority corrective action sites.

B. In-water sites are managed and moved towards cleanup
   1. Five thousand (5,000) acres are evaluated to assess whether cleanup is needed.
   2. The Department of Ecology's (Ecology) inventory of contaminated sediment sites is updated by review of information on patterns of sediment contamination and degradation.
   3. The Department of Natural Resources (DNR) identifies and addresses contaminated sites on state-owned aquatic lands (tidelands and bedlands).
      a. All known contaminated sediment sites and any accompanying institutional controls are identified on state-owned aquatic lands.
      b. A strategy to address areas affected by accumulation of woody debris in association with log transport, storage and processing is developed and implemented for state-owned aquatic lands.
      c. All contaminated sites that are remediated by capping on state-owned aquatic lands under CERCLA and MTCA receive proprietary use authorizations (through leases or other actions) from the DNR.

C. The public is informed
   1. A comprehensive presentation of all known contaminated sediment sites, their size, key contaminants, status and expected date for remediation to be completed is available to the public.

D. Monitor progress
   1. Source controls at cleaned sites are effective as shown in an evaluation of longer term monitoring data from a sample of sites.

PRIORITY 2: Reduce Continuing Toxic Contamination and Prevent Future Contamination

Long-term goal: Reduce and eventually eliminate harm from toxic pollutants entering Puget Sound.

The layers of contaminated underwater sediments and the number of upland sites scheduled for cleanup (see priority 1) reveal the history of toxic pollution in Puget Sound. However, sources of toxic substances still threaten the Sound's rich marine diversity. Seals and other marine mammals in Puget Sound have high levels of PCBs (polychlorinated biphenyls) and other toxics. The Puget Sound Ambient Monitoring Program tracks how many fish develop liver lesions associated with toxic contamination. Juvenile salmon from rivers with contaminated bays show higher levels of toxics than fish from clean estuaries. A high percentage of adult salmon returning to certain urban streams are dying before they spawn.

Although some toxic compounds have been banned, continuing sources of toxics into Puget Sound include industrial and municipal discharges and stormwater, oil spills, hazardous material spills, air deposition (which also contributes to stormwater pollution), seepage from hazardous sites on land, illegal discharges and dumping activities. The Environmental Protection Agency's Toxics Release Inventory reported that in 2001 over 879,000 pounds of toxic chemicals were released to the water and over 7.7 million pounds of toxic chemicals were released to the air in the Puget Sound basin.

Toxics are widespread in Puget Sound but there are geographic differences in on-going sources. For example, nearly all of the businesses in the Elliott Bay/Duwamish area are connected to the King County Metro sewer system and their wastewater discharges are treated and discharged through deep outfalls. However in Commencement Bay, Sinclair Inlet, Port Townsend, and other areas there are industries with individual permits and outfalls. Each outfall may have an historic or continuing sediment hot spot. In addition, over 100 sewage treatment plants are operated by Puget Sound local governments under National Pollutant Discharge Elimination System (NPDES) permits issued by Ecology.

Another source of toxic pollution is oil spills. Catastrophic oil spills are most likely along the main oil tanker routes from the ocean to the major Puget Sound refineries, and from other large commercial vessels including oil barges. The most common direct source of small to mid-sized oil spills that enter the water directly are oil transfer operations between vessels and facilities. Another important source is highway spills, such as from tank trucks that occur on land and drain to Puget Sound. The most recent significant oil spill occurred on December 30, 2003 during an oil transfer operation when a barge was being loaded at a major Puget Sound marine terminal and spilled about 4,800 gallons of heavy fuel oil into Puget Sound. Only two weeks later on January 15, 2004 there was a large release of transformer oil containing polychlorinated biphenyl (PCB) from a Columbia River dam. While this later release did not occur in Puget Sound, it illustrates

the on-going threat posed by hazardous material spills, including persistent bioaccumulative toxins (PBTs).

Increasingly, the toxics settling out of air pollution are recognized as a potentially large contributor to toxic contamination of Puget Sound waters. Air pollution from local sources is concentrated along transportation routes and areas with many residential heating sources. There is also some evidence of cross-Pacific transport of air toxics.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Reduce the use of hazardous chemicals by continuing to implement the persistent bioaccumulative toxins (PBT) strategy.
2. Reduce the loading of other substances by using a variety of best management practices and improved treatment methods.
3. Continue to place a priority on actions to prevent and respond to oil and hazardous material spills.

Desired Results for Reducing Continuing Toxic Contamination and Preventing Future Contamination in 2005-2007

A. Toxic loadings are reduced
   1. Reduce total statewide releases of air toxics as identified by the Toxics Release Inventory by 5 percent over the biennium. [1]
   2. The number of 25 to 10,000 gallon spills decreases to 35 and the volume of oil reaching surface waters from these spills decreases to 30,000 gallons.
   3. Amount of reclaimed wastewater in Puget Sound increases by 2 million gallons per day during the course of the biennium, from a 2003 maximum month average volume of 7.45 million gallons per day at 11 Puget Sound facilities.

B. State agencies control sources of contamination
   1. Department of Agriculture investigates, reports and enforces actions for all referred complaints about possible pesticide misuse.
   2. Department of Agriculture collects 60,000 pounds of unusable, cancelled or suspended pesticides in its waste pesticide program, the same rate of collection achieved in July 2003 to June 2004.
   3. DNR characterizes and evaluates 100 percent of dredge spoils for the potential suitability of beneficial re-use, dispersive open water disposal, non-dispersive open water disposal on state-owned aquatic lands, or removal to an approved disposal facility if testing and review determine that it is unsuitable for the above options.
   4. Through state aquatic land transactions, the Department of Natural Resources (DNR) identifies sites that may have excessive wood debris accumulations and initiates appropriate sampling investigations in coordination with the

[1] This target only provides an indirect indication of potential change in Puget Sound contamination. Air toxics strategies and performance measures are based on inhalation and public health risk. Decreases in their release to the air will provide some undetermined level of benefit to Puget Sound.

Department of Ecology to determine the need for remedial action on at least 10 percent of those sites.

5. By June 2007, National Pollutant Discharge Elimination System (NPDES) permits for 85 percent of municipal sewage treatment plants have been renewed, or newly issued within the past five years.
6. By June 2007, NPDES permits for 85 percent of industrial permits have been renewed or newly issued within the past five years.
7. The percent of large commercial vessels having incidents that can lead to oil spills is reduced by 5 percent.
8. Ecology responds to 95 percent of all spill incidents within 48 hours of their being reported to Ecology.

C. Plans to reduce toxics are developed
   1. PBT strategy and chemical-specific action plans are implemented.
      a. One chemical action plan is completed during the 2005-2007 biennium.
      b. The mercury cleanup plan is implemented.
   2. Ecology completes ____ toxic-focused water quality cleanup plans or technical studies during the biennium. (Ecology will provide target numbers in June 2005.)
   3. Ecology's Technical Resources for Energy Efficiency (TREE) program completes evaluations that suggest quantifiable waste reductions for 6 industrial facilities in the Puget Sound basin during the biennium.

D. The public is informed and involved
   1. Citizens, business owners, licensed pesticide applicators and others receive education, training and technical assistance to adopt behaviors and take actions to reduce toxic pollution.
   2. At least 125 marinas in Puget Sound and 1,500 boaters and fishermen are reached by an educational effort to reduce small spills aimed at commercial fishermen, boaters, and marinas and harbors that serve them.

E. Monitor progress and develop models
   1. Sufficient monitoring data are collected and made available to support activities to control toxics.
   2. DNR develops the scope for a mass-balance model for toxic metal and organic contaminants in Puget Sound.
   3. Environmental monitoring requirements for combined sewer overflow (CSO) outfalls are implemented on state-owned aquatic lands.

PRIORITY 3: Reduce the Harm from Stormwater Runoff

Long-term goal: Improve management of stormwater runoff and reduce combined sewer overflows to meet water quality standards in all waters of the basin.

Stormwater runoff is rain or snow that falls on streets, parking areas, rooftops and other developed land and flows directly to Puget Sound or is routed there through drainage systems, streams, and rivers. Stormwater runoff contamination is exacerbated by oil spills, leaking containers, hazardous material releases, air emissions, excessive lawn maintenance and illegal dumping.

Stormwater runoff causes two major problems. First, when stormwater runoff moves over developed land it picks up and transports pollutants to receiving waters. This pollutant mix may include oil, grease, heavy metals, pesticides and other toxic chemicals, sediment, bacteria, and nutrients. The Washington Department of Ecology (Ecology) estimates that of all the impaired water bodies identified for cleanup plans under the Clean Water Act, approximately one-third are impaired by stormwater runoff. These pollutants degrade the quality of surface waters, restrict harvesting in shellfish growing areas, harm or kill fish and other wildlife, limit recreational opportunities, contribute to sediment contamination in urban bays, and have the potential to pollute groundwater supplies (see priorities 1 and 2 regarding contaminated sediments and toxics).

The second major problem of stormwater runoff is the degradation or loss of habitat caused by increases in the volume of the runoff from developed lands. In native forests of the Pacific Northwest, researchers estimate that less than one percent of rain or snow becomes surface runoff. Most of the precipitation infiltrates to the ground, is taken up by plants, or evaporates. When forests and prairies are cleared and replaced by streets, parking lots and buildings, hydrology is completely changed, surface runoff increases dramatically, and becomes stormwater runoff. Without adequate controls, increased stormwater flows overwhelm stream channels, causing undercutting and erosion of stream banks, depositing excessive sediment, and altering in-stream fish and wildlife habitat. The federal services have identified habitat loss due to stormwater runoff as one of the factors limiting our ability to recover salmon species listed under the Endangered Species Act.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Expand the regulatory program of National Pollutant Discharge Elimination System (NPDES) stormwater permits.
2. Increase the use of innovative techniques known as low impact development.
3. Continue development of local comprehensive stormwater programs.
4. Manage runoff from state highways according to the updated highway runoff manual.
5. Continue to reduce the number and volume of combined sewer overflow (CSO) events to Puget Sound.

Desired Results to Reduce the Harm from Stormwater Runoff in 2005-2007

A. Water quality impairment from stormwater is improved
   1. Improved water quality conditions and less restrictive shellfish harvest classifications in one shellfish growing area threatened or degraded by stormwater runoff.
   2. Eighty (80) percent of the 10 Puget Sound jurisdictions with combined sewer overflows meet the milestones in their CSO reduction plans, such as implementing CSO reduction activities.

B. Permits and programs to manage stormwater are expanded
   1. Ninety (90) percent of the 80 to 85 jurisdictions who need a municipal stormwater permit have obtained a permit that includes provisions for monitoring and reporting.
   2. The number of local governments adopting the elements of the Puget Sound comprehensive local stormwater program increases by 20 percent during the biennium. Based on 38 responses to a 2004 survey of jurisdictions, all counties and 76 percent of cities had adopted at least half of the elements.
   3. Use authorizations for stormwater outfalls issued by the Department of Natural Resources (DNR) are coordinated with regulatory permitting agencies to provide for modeling of known potential impacts and long term monitoring on state-owned aquatic lands.
   4. Ecology staff carry out stormwater inspections at 500 construction sites.
   5. Ecology staff carry out stormwater inspections at 600 industries.

C. The use of low impact development stormwater practices is increased
   1. Credits for low impact development techniques in the *Stormwater Management Manual for Western Washington* are updated based on monitoring data and evaluations made available by January 2007.
   2. Four local governments adopt ordinances that allow for or encourage the use of low impact development techniques. This represents an increase of about 20 percent.

D. Runoff from state highways is managed
   1. Ninety (90) percent of state highway construction sites are prepared for the wet season by having in place effective erosion and sediment control best management practices. This represents an improvement of approximately 20 percent as measured by WSDOT for 32 moderate and high-risk projects from July 2001 to June 2003.
   2. One stormwater retrofit for existing impervious surfaces is completed on a prioritized outfall from a state highway where high-volume traffic drains to sensitive water bodies.
   3. Runoff treatment and flow control best management practices to mitigate the impacts of new impervious surface are implemented as part of transportation construction projects.

E. The public is informed and involved
   1. At least 3,100 home owners, vehicle owners, members of the real estate and development community, and state, tribal and local government staff increase their knowledge, skills and motivation to change behaviors and practices to reduce contamination and volume of stormwater runoff. This will include awarding 12,000 clock hours to real estate professionals.
   2. Fifty (50) percent of local governments will provide public education and involvement opportunities to citizens. This represents an increase from the current level of about 40 percent.

F. Monitor progress
   1. Municipal NPDES stormwater permits will include effectiveness monitoring.

PRIORITY 4: Reduce Nutrient and Pathogen Pollution Caused by Human Sewage and Animal Wastes

Long-term goal: Reduce nutrient and pathogen pollution from human and animal waste to meet water quality standards in all Puget Sound waters.

Protecting and restoring clean water is critical to the future of human and environmental health in Puget Sound. In recent decades, human and animal waste has polluted streams, wetlands, groundwater, and marine waters. A significant number of the water bodies on the Department of Ecology's (Ecology) list of polluted water bodies violate standards for bacterial pollution.

Clean water is particularly important to the rich and abundant shellfish resources of Puget Sound, and is key to preserving Washington State's position as the nation's leading producer of farmed bivalve shellfish. Because shellfish are harvested for human consumption, the waters in which they grow must meet stringent bacterial standards. From 1995 to 2004, pollution control efforts by state agencies, local governments, tribes, industry groups and citizens have restored approximately 8,000 more acres of commercial shellfish beds than were downgraded during the same period. Approximately 30,000 acres remain restricted or prohibited for commercial and recreational harvest out of an estimated 165,000 acres of total classified acreage. From July 2003 to June 2004, less restrictive classifications for shellfish harvest areas were established for a total of 2,852 acres.

Cleaning up polluted waters and preventing future contamination from wastes involves the management of sewage treatment facilities, onsite sewage systems, and other nonpoint, or diffuse sources of bacteria and nutrients such as boating and animal-keeping facilities. Over 100 sewage treatment plants are operated by Puget Sound local governments under National Pollutant Discharge Elimination System (NPDES) permits issued by Ecology (see priority 2).

At the same time, individuals and businesses in the Puget Sound region own and operate an estimated 472,000 onsite sewage disposal systems permitted by local health agencies. Many of these systems are aging and are poorly maintained, and the technology used in many newer systems requires regular care. Systems that do not work properly present health risks and tend to contaminate ground and surface waters with nutrients, pathogens, and other contaminants.

Large onsite sewage systems (over 3,500 gallons-per-day capacity) are regulated by the Department of Health (Health) or Ecology and are operated by a variety of public and private entities. Most other onsite sewage systems are regulated by local health agencies that rely on construction permit fees as a revenue source. This results in a focus on design and construction approval and limited capacity to educate homeowners, monitor system performance, assess environmental impacts, and support system upgrades when failures occur.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Focus Action Team partnership efforts and resources geographically, in high risk locations such as Hood Canal, in threatened or contaminated shellfish harvest areas, and in streams where state and local partners can carry out water clean up plans and shellfish restoration strategies to reduce loadings.
2. Provide technical assistance and funding to strengthen local programs in data management, public education, monitoring, and corrective actions, especially in high-risk locations.
3. Assist local jurisdictions in finding solutions to increase landowner compliance with onsite sewage disposal system maintenance and animal waste management practices through education and regulated inspection.
4. Continue to emphasize preventing pollution to protect the environment and human health in regulatory, technical assistance, and management activities.

Desired Results to Reduce Nutrient and Pathogen Pollution from Human Sewage and Animal Wastes in 2005-2007

A. Pollutant loads are reduced
   1. Shellfish growing area improvements:
      a. Improved water quality conditions result in less restrictive shellfish harvest classifications for 1,000 acres.
      b. Improved water quality conditions and less restrictive harvest classifications in two of the 18 shellfish growing areas threatened or degraded by concentrations of onsite sewage systems.
   2. Fecal coliform loading to Hood Canal from the Skokomish River (measured at the Highway 106 Bridge) is reduced by 44 percent compared to the baseline established in 2000. The fecal coliform loading to Hood Canal from the Union River is reduced by 34 percent over the course of the biennium.
   3. Gallons of boater waste collected at pumpouts due to State Parks education and boater waste facilities increases by 5 percent during the biennium, based on an annual estimate of approximately 1.5 million gallons collected from June 2003 to June 2004.

B. State and local efforts improve watershed health
   1. The Department of Ecology (Ecology) completes ___ nutrient, dissolved oxygen, and fecal coliform-focused water quality cleanup plans on an annual basis. (Ecology will provide target numbers in June 2005.)
   2. Eight (8) restoration projects are conducted in commercial shellfish areas identified as "threatened."
   3. Five (5) percent of the "threatened" commercial shellfish growing areas from the prior year's Early Warning List are no longer identified as "threatened."

C. Management of onsite sewage disposal systems
   1. By June 30, 2007, Puget Sound local health jurisdictions complete risk-based management plans for onsite sewage systems, as required by revised State Board of Health rules, and begin their implementation.

2. The number of local health jurisdictions able to create GIS maps to evaluate and manage concentrations of onsite sewage systems located adjacent to water bodies impaired by fecal or nutrient loadings increases from 3 to 8 of 12 Puget Sound jurisdictions.[2]
3. The Department of Health tracks long term management of large onsite sewage systems (LOSS) under the Operating Permit Program provided in revised State Board of Health rules.

1. At least 90 percent of Puget Sound large Concentrated Animal Feeding Operation (CAFO) facilities will be in compliance with Washington State Department of Agriculture rules by the end of the biennium.
2. Conservation Districts approve and implement 200 best management practices on small non-commercial livestock operations.
3. Conservation Districts approve and implement 100 best management practices on larger livestock operations that meet the definition of Animal Feeding Operations (AFOs), and 100 best management practices on Concentrated Animal Feeding Operations (CAFOs).
4. Conservation Districts complete 240 approved conservation plans.
5. Eight (8) boater waste facilities are installed or replaced in Puget Sound through funding from the State Parks and Recreation Commission. There are currently 84 public and private pumpout facilities in Puget Sound, 5 of which were installed or replaced by the Commission since July 2003.

F. <u>The public is informed and involved</u>
1. At least 1,650 homeowners and boaters in Hood Canal will increase their knowledge, skills, and motivation to change their behaviors and practices to improve their management of onsite sewage systems, vessel holding tanks, pet and livestock waste.
2. Throughout Puget Sound, citizens engage in public education and involvement opportunities that change behavior and result in actions to reduce nutrient and pathogen pollution and to increase beneficial uses of state waters, including the safe harvest of shellfish.

[2] Achieving this goal will require additional financial and technical resources. The Department of Health will continue to actively work with the Puget Sound Action Team staff, local health jurisdictions, and others to implement this data collection goal.

Priority 4 Sidebar: Hood Canal Low Dissolved Oxygen: A Geographic Focus for 2005-2007

The Puget Sound Action Team partnership and federal, tribal and local partners will work together to focus special efforts in Hood Canal during the 2005-2007 biennium to address low dissolved oxygen (DO) levels. At times in recent years, dissolved oxygen concentrations have dropped to levels that threaten marine life, especially fish and many invertebrates that get trapped in waters containing less than two parts per million of oxygen. Low oxygen persists longer each year and extends over a broader geographic area than previously observed.

The extent to which the problem is a result of natural conditions and human-influenced activities is the subject of a long-term study led by the University of Washington with key roles by Ecology and the Hood Canal Salmon Enhancement Group, as well as the U.S. Geological Survey and others. In spring 2004 the Puget Sound Action Team staff and the Hood Canal Coordinating Council jointly developed the *Hood Canal Low Dissolved Oxygen Preliminary Assessment and Corrective Action (PACA)* plan in collaboration with Action Team partner agencies, federal, local and tribal governments and citizen organizations. The plan identifies the primary sources of nutrient pollution and priority actions to reduce the pollution contributing to the low DO problem. The plan will be revised based on further monitoring and analysis from the long-term study as data become available. The relative contributions of nutrients estimated for human activities include human sewage (60 percent), agricultural manure (14 percent), chum salmon carcasses (13 percent), stormwater runoff (11 percent), forestry activities (1 percent), and discharges from sewage treatment plants (less than 1 percent).

The Action Team staff, in consultation with partner agencies, is administering state and federal funding appropriated to implement the priority corrective activities recommended in the PACA, such as increasing areas served by community sewer systems, exploring options for upgrading onsite sewage systems, controlling stormwater, developing alternatives to marine disposal of salmon carcasses, providing assistance and incentives for livestock waste management, and education and outreach to local landowners. These actions are the first steps in responding to the canal's low dissolved oxygen problems. An intensive three-year monitoring and modeling effort of the Hood Canal Dissolved Oxygen Program will help advise about additional actions that can be initiated in future years.

For more information visit http://www.psat.wa.gov/Programs/hood_canal.htm and http://www.prism.washington.edu/hcdop/index.html

PRIORITY 5: Protect Shorelines and Other Critical Areas that Provide Important Ecological Functions

Long-term goal: Preserve the ecological processes that create and maintain marine and freshwater habitats and minimize losses in ecological function and area of these habitats within the Puget Sound basin.

Puget Sound population growth and the resulting agricultural, forestry and urban activities have modified natural shorelines and other critical areas, compromising the ecological functions they provide. Evidence of ecosystem harm can be found in the high incidence of closed shellfish harvest areas, the list of polluted water bodies, the salmon populations listed under the Endangered Species Act, the disappearance of forage fish and eelgrass in areas of shoreline modification, changes in stormwater flows in urban areas, and studies correlating basins with high impervious surfaces and other measures of development with degraded shoreline and aquatic habitat.

The key to protecting the ecosystem as growth occurs is to regulate new development and re-development, as well as to enforce these regulations. In 1971 the Washington State legislature passed the Shoreline Management Act to regulate shoreline activities, and in 1990 passed the Growth Management Act (GMA) to ensure that growth occurs in an orderly manner.

All Puget Sound jurisdictions will be updating their growth management plans and ordinances by the end of 2005 to include best available science, especially as it applies to the protection of anadromous fish such as salmon. Part of the use of best available science includes the use of landscape scale information to understand the implications of planning and regulatory decisions. Over the next decade Puget Sound shoreline jurisdictions will update their Shoreline Master Programs to be consistent with revised guidelines that will help preserve remaining nearshore habitat from the damaging effects of shoreline modification.

While the regulatory approach is essential as the region accommodates a growing population, the goal of many communities is to permanently preserve key marine and freshwater properties through acquisition or to protect them through measures such as conservation easements. Because there are so few remaining high value areas, the functions they provide are vitally important to supporting ecosystem recovery. Citizens, businesses, farmers, tribes and local governments have come together through local land trusts and in partnership with regional and national conservation groups to identify high value properties and seek landowners willing to cooperate in preserving these lands. Local governments have adopted tax incentive programs such as the Public Benefit Rating System and Conservation Futures taxing programs to support this approach. From July 2003 to June 2004 these groups permanently protected 533 acres of riparian habitat, 1124 acres of freshwater wetlands, and the habitat-forming processes of five Puget Sound shoreline drift cells through land acquisition. In addition, the Department of Natural Resources placed 22.17 acres of aquatic land under permanent

protection and the Department of Fish and Wildlife purchased 230 acres of high value shoreline and critical area properties.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Help achieve effective critical areas ordinance updates, other growth management and Shoreline Master Program updates through funding, technical assistance, data and comment.
2. Work with state agencies, local governments and other partners to conserve shorelines and other critical areas through application of a variety of conservation tools.
3. Work at the local level to integrate regulatory and conservation approaches in implementing watershed and salmon recovery plans.
4. Prevent the introduction of new aquatic nuisance species in Puget Sound, in part through volunteer activities.

Desired Results to Protect Shorelines and Other Critical Areas that Provide Important Ecological Functions in 2005-2007

A. Habitat is conserved
   1. Increase the number of acres of ecologically important land permanently protected and properly managed through the course of the biennium. This will be accomplished through Department of Natural Resources (DNR) aquatic reserves, Washington Department of Fish and Wildlife (WDFW) land acquisition (fee-simple and conservation easements), land acquisitions funded by grants administered by the Interagency Committee on Outdoor Recreation (IAC), and oil spill Natural Resources Damage Assessments administered by Ecology.
   2. Aquatic reserves and other withdrawn areas are evaluated, designated and managed by DNR on state-owned aquatic lands.

B. Protections are improved
   1. Snohomish County, Whatcom County, the city of Port Townsend and the city of Bellingham update their Shoreline Master Programs (SMP) to new guidelines by December 1, 2005. Other jurisdictions funded for SMP updates as early adopters will be on schedule for this biennium or soon after.
   2. Island, Mason, San Juan and Skagit counties will update their critical areas ordinances to include best available science to protect eelgrass and kelp beds, forage fish spawning habitat, and shellfish growing areas by December 1, 2005.
   3. DNR in collaboration with WDFW protects 100 percent of eelgrass beds and herring spawning areas within areas of geoduck tracts where wild stock geoduck are being harvested on state-owned aquatic lands.
   4. A statewide seagrass management and conservation plan is developed by DNR involving local, state and federal agencies, tribes, private tideland owners and other interests to create and agreed-upon consistent approach for conservation, mitigation, restoration and monitoring to protect this critical resource and/or its functions.
   5. A report with recommendations for managing ballast water is submitted to the

legislature by December 2006.

6. A statewide strategy for coordinating land acquisition and disposal by state agencies is implemented as directed by the legislature based on a June 30, 2005 report by the Interagency Committee on Outdoor Recreation.
7. No new aquatic nuisance species are introduced, and the spread of existing species, such as Spartina, is minimized.
8. Eco-regional planning is used as a tool to identify critical ecologically important lands and marine areas.

C. Technical assistance is provided to local governments

1. A computer-based tool for conducting landscape analysis to assess projects and sub-basin areas is developed to assist local governments in protecting shorelines and other critical areas.
2. Local governments receive technical information and assistance with comprehensive planning decisions and permits related to wetlands.
3. Local governments and organizations receive technical assistance for creating and monitoring locally adopted marine protected areas.
4. Local governments receive guidance regarding best available science to protect the functions, values and processes of marine riparian and nearshore resources.
5. Central and south Sound counties receive assistance to assess the feasibility of creating Marine Resource Committees outside of the Northwest Straits Initiative structure.

D. The public is informed and involved

1. Citizens receive technical information and assistance on wetlands restoration and stewardship in the context of voluntary actions, as well as regulatory actions related to shoreline management and federal permitting activities.
2. Shoreline landowners, consultants and developers receive education and technical assistance to promote alternatives to traditional "hard" methods of shoreline modifications that allow the shoreline to maintain natural processes.
3. At least 1,350 local government staff, real estate professionals, developers and citizens increase their knowledge, skills, and motivation to change their behaviors and practices to better protect shorelines and other ecologically critical areas, including restoration and stewardship voluntary actions. This will include awarding 2,400 clock hours to real estate professionals.

E. Monitor progress

1. As part of a long-term program to monitor eelgrass condition, DNR tracks status and trends in eelgrass extent in Puget Sound yearly, and completes focus studies in two regions.
2. DNR expands its eelgrass monitoring to study linkages between eelgrass bed dynamics and stressors.
3. DNR tracks status and trends in floating kelp abundance throughout Puget Sound as part of a long-term monitoring program.
4. DNR develops a strategic monitoring plan for all authorized activities on state-owned aquatic lands in collaboration with the Puget Sound Ambient Monitoring Program (PSAMP), the Comprehensive Monitoring Strategy and other

monitoring efforts.

5. DNR tracks biodiversity in intertidal biotic communities in central and southern Puget Sound and completes collaborative research with University of Washington on processes related to observed patterns in intertidal biodiversity.

PRIORITY 6: Restore Degraded Nearshore and Freshwater Habitats

Long-term goal: Achieve a net gain in ecological function and area of streams, nearshore and estuarine habitats within Puget Sound.

Changes to landscapes along Puget Sound's shorelines and within its watersheds over the past 150 years resulted in the loss of thousands of acres of productive and diverse aquatic habitats. Habitat loss and degradation occurs in streams, riparian areas, floodplains, estuaries, wetlands, and marine shorelines throughout Puget Sound basin. These habitats support many species throughout their life histories.

Declining water quality associated with the loss and degradation of upstream habitats threatens shellfish harvesting in Puget Sound. Increased development of river floodplains and marine shorelines requires management of new flood and landslide hazards. The greatest losses have occurred in areas of high population density and areas associated with major infrastructure such as roads, dams and levees. An example of dramatic habitat loss is in the urbanized central Puget Sound basin as a result of stream diversion and channel restrictions, shoreline armoring, over-water structures and filled wetlands.

Current restoration theory suggests that restoration efforts should be focused on recovery of underlying natural processes. Restoration projects that create and maintain habitats by recovering processes such as bluff erosion, over-bank flooding and sedimentation are likely to be successful because they will continue to function over time and will contribute to the creation or enhancement of various habitats across the landscape influenced by the affected processes. Implementing this type of restoration requires a new level of cooperation and collaboration across the region.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Work together to apply the best scientific principles to improve the performance of process-based restoration projects.
2. Support and assist in regional coordination of large-scale initiatives such as the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP), the Puget Sound and Adjacent Waters program, the Northwest Straits Commission, salmon habitat restoration through the Salmon Recovery Funding Board, and other efforts.
3. Control aquatic nuisance species, including implementing a rapid response plan should any new species be detected.

Desired Results for Restoring Degraded Nearshore and Freshwater Habitats in 2005-2007

A. Restoration projects improve habitat
   1. Projects to restore natural habitat forming processes increase the area of tidally and seasonally influenced estuarine wetlands by 3,500 acres over the course of the biennium, an increase of approximately 115 percent based on a total of 817

acres restored from July 2003 to June 2004.

2. Projects to restore riparian habitat improve conditions and processes on 1,000 acres of Puget Sound shorelines, estuaries, rivers and streams.
3. Efforts to restore and protect the natural delivery of sediment and organic matter improve the natural functions of two Puget Sound drift cells by the end of the biennium.
4. Reduce the area of Puget Sound infested by *Spartina* spp. by 15 to 20 percent consistent with the Department of Agriculture's 2001 *Spartina* Management Plan for North Puget Sound. This represents a reduction in *Spartina* infestations from 760 to approximately 630 solid acres located primarily in the waters of Island, Skagit and Snohomish counties.
5. The Department of Natural Resources (DNR) coordinates and assists with identifying and funding of collaborative restoration efforts with local, state, and federal entities on state-owned aquatic lands.
6. Riparian habitat protected by the Conservation Reserve Enhancement Program (CREP) increases by 1,200 new acres and 65 new stream miles.

B. Puget Sound Nearshore Ecosystem Restoration Project creates a new approach for restoration in Puget Sound

1. Partners complete a feasibility report and pursue enactment of an approach for implementing strategic, large-scale projects to restore processes that create and sustain nearshore habitats.
2. Process-based restoration objectives identified by PSNERP partners are explicitly considered in all large-scale mitigation projects, natural resource damage assessment decision documents, and waterfront redevelopment projects affecting Puget Sound's nearshore environments.
3. Washington Department of Fish and Wildlife (WDFW) and partners provide technical support to restoration feasibility programs for Capitol Lake, Burlington Northern Santa Fe Railroad, and other priority, large-scale restoration activities.
4. WDFW and the Department of Ecology (Ecology), in collaboration with partner agencies, develop and pilot mechanisms to optimize the environmental benefits derived from environmental impact mitigation.

C. The public is informed and involved

1. At least 650 planners, natural resource agency staff, real estate professionals, developers, volunteers and landowners will increase their knowledge, skills and ability to advise others in the restoration of degraded shoreline, nearshore and freshwater habitats. Actual restoration projects accomplished through education efforts will restore 9,000 feet of shoreline or streambank areas.

D. Monitor progress

1. The proportion of restoration actions funded through the Aquatic Lands Enhancement Account and the Salmon Recovery Funding Board that incorporate project-specific effectiveness monitoring and formal adaptive management reaches 80 percent by the end of the biennium.

PRIORITY 7: Conserve and Recover Orca, Salmon, Forage Fish and Groundfish

Long-term goal: Achieve balanced, stable and self-sustaining populations of all indigenous marine species in Puget Sound.

The Puget Sound Action Team has identified conserving and recovering declining species of orca, salmon, forage fish and groundfish as a priority, recognizing that depletions of these aquatic species may signal a more serious ecosystem imbalance.

Federal and state laws require special protection efforts and recovery plans to conserve and recover species at risk of extinction. Because several recovery plans with different goals will be implemented during the 2005-2007 biennium, Action Team partners will work together to coordinate activities among the various recovery plans. All of the efforts underway for other strategic Puget Sound priorities (see priorities 1 through 6) to clean up and prevent pollution and to improve habitats will benefit orca, salmon, forage fish groundfish and other species, but additional actions identified in species recovery plans will accelerate that recovery.

Orca

Orca (*Orcinus orca*) – or killer whales – are the world's largest dolphins. Several different populations of killer whales visit Puget Sound and the Strait of Juan de Fuca. Transient killer whales prey on seals and other marine mammals, travel widely in small groups and are part of a widespread population. The Northern Resident killer whales are fish-eaters that travel in pods and spend much of their time in British Columbia but occasionally enter Washington waters. The most common visitors to Washington are the Southern Resident killer whales that spend their summers in transboundary waters around the San Juan Islands and may travel throughout the Sound at other times of the year.

Canada has listed both the Northern and Southern Resident whales under their Species at Risk Act. The NOAA Fisheries (formerly National Marine Fisheries Service) has designated the Southern Resident whales as depleted under the Marine Mammal Protection Act. The Washington Fish and Wildlife Commission in April 2004 voted to add to state list of endangered species all killer whales that visit Washington waters.

The total population of the three pods (known as J, K and L) of Southern Resident whales was 83 in the summer of 2003. Although an additional calf was sighted in January of 2004, because of the loss of another whale the total in August 2004 remains at 83. This is up from a low of 80 in 2001 but below a recent peak of 98 whales in 1995. Factors thought to be contributing to the decline are poor availability of prey, toxic contamination, human disturbance, and altered number and distribution of breeding animals because of past captures. The key prey for the Southern Residents are salmon, and the numbers of adult salmon available to orca are determined by factors such as freshwater and nearshore habitat conditions, open ocean habitat conditions, fishing decisions, and hatchery decisions. Nearshore habitat is also crucial for the forage fish

that are prey for whales and feed for salmon. Toxic contamination in Puget Sound is concentrated in sediment hot spots. Because the whales occasionally visit Elliott Bay and other areas in central or southern Puget Sound and apparently also eat bottom fish, all of the hot spots with toxics that would be passed on to whales are of concern. Human disturbance can occur from private vessels and commercial whale watching boats.

Salmon

In 1999, NOAA Fisheries listed Puget Sound chinook and Hood Canal summer chum salmon as threatened under the federal Endangered Species Act (ESA). Puget Sound stocks of Bull Trout were also listed as threatened under the ESA by the U.S. Fish and Wildlife Service. The causes of salmon declines have been broadly categorized as habitat destruction, harvest management, hatchery management and hydropower projects.

The ESA listings triggered an aggressive salmon and watershed recovery response, outlined in the 1999 *Statewide Strategy to Recover Salmon: Extinction is Not an Option* developed by the Joint Natural Resources Cabinet. The state legislature in 1998 enacted the Watershed Planning Act, creating local planning units to decide the actions needed to provide adequate water for people and fish as well as healthy watersheds. The Salmon Recovery Act funded local lead entities to coordinate salmon restoration and recommend projects to the Salmon Recovery Funding Board for approval according to restoration strategies for each watershed. The act also initiated for each watershed an analyses of factors limiting salmon recovery led by the Conservation Commission. The Watershed Planning Act is administered by Ecology, while the Salmon Recovery Funding Board is administered through the Interagency Committee for Outdoor Recreation. The Puget Sound Shared Salmon Strategy, a public and private partnership, is coordinating the development of a salmon recovery plan for Puget Sound.

Forage Fish

Several important species of forage fish such as surf smelt, sand lance and Pacific herring that live and spawn on the shoreline or in the shallow marine waters of Puget Sound are the focus of management plans to address recent declines. Surf smelt and sand lance spawn high up on beaches, usually above the ordinary high water mark. Herring spawn in the eelgrass beds in clear, shallow nearshore waters. Forage fish and their eggs are critical prey for a large variety of marine life including fish, birds, and marine mammals. Migrating salmon rely on forage fish as they travel to and from the Pacific Ocean.

Pacific herring stocks declined sharply in the north Sound and Strait of Juan de Fuca in the late 1990s, although there were slight increases in the central and south Sound stocks. Disease and warm water stress have been suggested as possible causes for declines in the Cherry Point population of herring. In August 2004, NOAA Fisheries announced it will review the population status of Cherry Point herring and consider listing them under the Endangered Species Act. Dredging, pollution and shading of nearshore waters can remove or diminish eelgrass beds that herring use as spawning habitat. Inventories of surf smelt and sand lance spawning areas by WDFW and others suggest that extensive shoreline modification of Puget Sound has significantly reduced these habitat areas. As part of a statewide inventory of saltwater shorelines, scientists at

the Department of Natural Resources found that approximately one-third of all saltwater shorelines in Puget Sound have some kind of shoreline modification structure, such as a bulkhead or seawall. These "hard" armoring structures and loss of shoreline vegetation damage or destroy the habitat for surf smelt and sand lance spawning. Past and ongoing development pressures on the shoreline continue to threaten this fragile yet critical part of the ecosystem.

Groundfish

Groundfish, and rockfish in particular, have declined along the entire west coast of the United States, including Puget Sound. In some cases, this decline may be the result of changes in water temperature, especially for migratory species such as Pacific cod, hake and walleye pollock. Rockfish, on the other hand are generally not migratory, but have fidelity to the site where they settle out as larvae. They are susceptible to fishing pressure, partly because they do not move, and in addition because they are opportunistic and non-discriminating feeders. The strongest suspected cause of decline is associated with both sport and commercial fishing.

Some of the 18 species of groundfish in Puget Sound were petitioned for listing as threatened or endangered under the federal Endangered Species Act, a petition that was denied in 2000 by the National Marine Fisheries Service (now NOAA Fisheries). However, the federal agency concluded that state authorities should impose stronger conservation measures and target meaningful recovery efforts.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Achieve significant progress on priorities 1 through 6 of this document for overall ecosystem protection and recovery to support recovery of these species.
2. Implement actions required in species recovery plans, provide technical guidance and support to local implementers, and participate in addressing regional needs for monitoring and adaptive management.
3. Help coordinate implementation of recovery plans to avoid unnecessary duplication and to leverage opportunities among the various recovery plans.
4. In anticipation of completion of a rockfish conservation plan, support regulatory and voluntary tools for rockfish recovery.

Desired Results for Conserving and Recovering Orca, Salmon, Forage Fish and Groundfish in 2005-2007

A. Orca recovery plans are completed and implementation begun
   1. Washington Department of Fish and Wildlife (WDFW) completes an orca recovery plan with specified management actions and implementation of Action Team partner agency activities occurs on the schedule identified in the plan.
   2. Action Team partner agencies participate in the development and implementation of orca recovery plans developed by NOAA Fisheries and Canada's Department of Fisheries and Oceans.

B. Salmon recovery plan is implemented
   1. Action Team agencies implement the habitat management activities identified for them in the Shared Strategy for Puget Sound's salmon recovery plan.
   2. Hatchery reforms identified by the Hatchery Scientific Review Group and, where appropriate, approved by NOAA Fisheries, are implemented.
   3. Harvest is executed in compliance with the Endangered Species Act.
   4. Re-licensing of hydropower projects is consistent with salmon recovery goals.

C. Marine fish are protected
   1. Healthy stocks of forage fish are maintained by implementing WDFW's Forage Fish Management Plan.
   2. Forage fish stock and habitat information is available in Geographic Information System (GIS) format and is accessible to the public.
   3. Direct and indirect harvest impacts on rockfish are minimized.

D. Habitat conservation plans are developed by the Department of Natural Resources
   1. Strategies are developed through a habitat conservation planning effort to reduce impacts to listed species on state-owned aquatic lands.
   2. A low-effect habitat conservation plan is completed for geoduck wild stock harvest.

E. The public is informed and involved
   1. Research related to conserving and recovering species at risk, especially research in nearshore habitat and food chain issues, is transferred to federal, state, tribal and local governments and citizens.

F. Monitor progress
   1. Status and trends monitoring continues to track recovery of threatened orca, salmon, ground fish and forage fish populations.

The Role of Science in Puget Sound Conservation and Recovery in 2005-2007

Long-term goal: Assess the health of Puget Sound and its resources and communicate information to promote informed choices for the environmental management of Puget Sound.

Science is a foundation for the Action Team partnership's efforts to conserve and recover Puget Sound. Scientific results developed through the broad and substantial efforts of scientists from numerous federal, state, local and tribal governments, universities, colleges, environmental organizations and citizen groups help the Action Team partnership understand the workings of the Puget Sound ecosystem and assess the influence of humans in the ecosystem. Some scientific investigations, such as long-term monitoring, help detect both natural and human-caused changes in the ecosystems and measure the effectiveness of our management activities. Other types of investigations can help uncover cause-and-effect relationships that can be useful in directing management actions. The use of scientific results is possible only as scientific information is communicated to decision makers, citizens and other stakeholders to help inform their work to protect and restore Puget Sound.

Action Team Partnership's Proposed Strategy for 2005-2007

1. Conduct Puget Sound research and monitoring activities to improve the scientific understanding of the Puget Sound ecosystem and evaluate the effectiveness of environmental resource management programs.
2. Expand the knowledge base of Puget Sound science through collaborations of partner agencies with academic and scientific institutions, local and tribal governments, and citizen monitoring groups. Coordinate these interdisciplinary efforts to ensure consistencies and efficiencies in data management and protocols for sampling and analysis.
3. Provide information to citizens, government leaders, and resource managers to help them improve efforts to protect and restore Puget Sound.

Desired Results for Continued Efforts in Monitoring and Research in 2005-2007

1. Apply scientific findings to evaluate the effectiveness of management activities and suggest adaptations and refinements to strategies to ensure that the stated goals for Puget Sound priorities and programs are achieved.

2. Apply information on the status and trends of forage fish, ground fish, marine birds, seagrasses and other select species to help guide conservation and recovery activities.

3. Identify threats to human health from marine environmental conditions such as harmful algal blooms, domoic acid, paralytic shellfish poisoning, and other water contaminants.

4. Identify threats to human and marine wildlife health from exposure to toxic contaminants in the marine food web.

5. Disseminate research and monitoring results to managers via publications in primary research and technical literature, PSAT newsletters, meetings/workshops, and the 2007 Puget Sound Georgia Basin Research Conference.

6. Provide data from the Puget Sound Ambient Monitoring Program (PSAMP) and other research efforts in easy-to-use formats to scientists, planners, educators and managers so that they may use and benefit from the findings.

7. Use scientific data to identify and set priorities for emerging issues (e.g. toxic contamination, water quality degradation, habitat changes) in order to:
    a. Focus development of new research partnerships to address important and/or urgent questions and
    b. Refer issues to appropriate management authorities for rapid response to significant environmental changes.

8. Apply predictive models and assessment tools, including models that help predict the fate and transport of contaminants through the food web, to help guide restoration and protection actions for Puget Sound processes, habitats and species.

9. Provide technical assistance in sampling and analysis procedures, protocols and guidelines to governments, community groups and other scientists to help generate consistent, high quality and scientifically sound data about Puget Sound.

10. Implement the Intensively Monitored Watershed Program to investigate cause-and effect relationships in select watersheds and estuaries.

Glossary of Planning Terms

***2005-2007 Puget Sound Conservation and Recovery Plan*:** A biennial work plan for the Puget Sound Action Team Partnership. The work plan combines the June 2004 adopted *2005-2007 Puget Sound Priorities, Strategies and Results* document with proposed budget information and activities submitted by state agencies and university programs in September 2004. The Action Team will submit the approved work plan to the governor and the legislature according to the requirements of RCW 90.71.050. The plan does not include everything happening the state government on Puget Sound, nor does it attempt to roll up all federal, local and tribal government and non-governmental organization implementation actions.

***2005-2007 Puget Sound Priorities, Strategies and Results*:** The June 2004 document established the priorities, strategies, and desired results for the *Puget Sound Conservation and Recovery Plan 2005-2007* and provided guidance for agencies and university programs in planning activities and budget proposals that are focused on achieving progress on the priorities during the July 1, 2005 to June 30, 2007 biennial budget period.

Priority: The priorities break down the goals of the long-term *Puget Sound Water Quality Management Plan* into smaller, more specific pieces that focus the partnership on the objectives that are the most important to work on together during the 2005-2007 biennium, based on an assessment of the existing threats and opportunities in Puget Sound.

Long-term goal: For each priority this is an environmental condition or outcome that represents a significant aspect of resolving the problem over a time period that extends beyond the two-year budget period.

Strategies: For each priority these are the key methods or approaches that describe how the partnership will achieve progress on the priority during the two-year budget period.

Desired results: Each priority includes desired results that Action Team partners have identified along with measures of progress they are committed to achieve, depending on funding they receive under the proposed budget. If funded, the partnership will use these as "expected" results and measures to track and report their progress on each priority to the public, the governor and the legislature during and at the end of the two-year work plan period.

Activity: An activity is something an agency does to accomplish goals and make progress on priorities. It consumes resources and helps produce desired results. An activity produces specific results that can be products, services or outcomes.

Proposed Budget for the 2005-2007 Puget Sound Conservation and Recovery Plan

Tables 1, 2, 3, 4a, and 4b on the following pages present the budgets proposed by state agencies and university education programs for implementing the 2005-2007 *Puget Sound Conservation and Recovery Plan.*

Key To Budget Table Information

Budget Code: A budget code is assigned by agencies to a programmatic or topical division of agency funds in the work plan. Funding under each budget code identifies activities or a program that supports one or more related priorities and results in the work plan.

Title: Short descriptive title of the budget activity.

Carry Forward Level Proviso Funds: Funds appropriated as a proviso by the legislature, specifically designated to implement the Puget Sound work plan during the 2003-2005 biennium that are carried forward in proposed budgets for 2005-2007.

Other continuing funding: Non-proviso funds carried forward from the 2003-2005 biennium that agencies are voluntarily reporting on to the Action Team so that Puget Sound benefits can be tracked.

Proposed Enhancements for 2005-2007: Proposed increases in funding by state agencies for the 2005-2007 biennium.

Total: The total amount of funds proposed as carry forward proviso funds, continuing non-proviso funds, and proposed enhancements for 2005-2007 for each budget code.

Fund: The source of the funds (see list of acronyms below).

Codes for Funding Sources:

GF-S	General Fund-State
GF-F	General Fund-Federal
GF-F Capital	General Fund-Federal
GF-P/L	General Fund-Private Local
ALEA	Aquatic Lands Enhancement Account
WQPF	Water Quality Permit Fees
MVF	Motor Vehicle Fund
STCA	State Toxic Control Account
OSPA	Oil Spill Prevention Account
WQA	Water Quality Account
FAWA	Freshwater Aquatic Weed Account
WQA-Capital	Water Quality Account-Capital
HWAA	Hazardous Waste Assistance Account
VRA	Vessel Response Account

Table 1. 2005-2007 Proposed Work Plan Budget by Agency

Agency	Operating vs. Capital Funds	Carry Forward Level of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total	Total Proposed Proviso Funding
Agriculture	Operating	$74,000			$74,000	$74,000
Community, Trade and Economic Development	Operating	$123,000			$123,000	$123,000
Conservation Commission	Operating	$494,000			$494,000	$494,000
	Capital	$840,000			$840,000	$840,000
	Total	$1,334,000			$1,334,000	$1,334,000
Ecology *	Operating	$12,670,441	$12,825,975	$322,976	$25,819,392	$12,993,417
Fish and Wildlife**	Operating	$3,113,427		$1,961,573	$5,075,000	$5,075,000
Health	Operating	$2,675,000	$676,000	63,928	$3,414,928	$2,738,928
Natural Resources***	Operating	$1,342,950		$741,300	$2,084,250	$1,688,050
Puget Sound Action Team	Operating	$5,035,400		$1,325,000	$6,360,400	$6,360,400
Parks and Recreation Commission	Operating	$191,000	$75,000		$266,000	$191,000
	Capital		$450,000		$450,000	
	Total	$191,000	$525,000		$716,000	$191,000
Transportation	Operating		$26,627,400		$26,627,400	
University of Washington	Operating	$470,000		$47,000	$517,000	$517,000
Washington State University	Operating	$331,000		$89,000	$420,000	$420,000
All Agencies Operating		$26,520,218	$40,204,375	$4,550,777	$71,275,370	$31,043,995
All Agencies Capital		$840,000	$450,000		$1,290,000	$840,000
TOTAL All Agencies		**$27,360,218**	**$40,654,375**	**$4,550,777**	**$72,565,370**	**$31,883,795**

***Notes for Ecology**: The amount shown as Proposed Enhancements reflects a shift of $322,976 for ambient monitoring and laboratory certification from the State Drought Preparedness Account to the Water Quality Account.

****Notes for Fish and Wildlife:** The amounts shown in this version of the plan reflect a shift of $300,000 from Carry Forward Proviso Funds for Orca Conservation, Recovery and Monitoring to Proposed Enhancements and a "placeholder" of $300,000 in Carry Forward Proviso Funds for Fish Contaminant Monitoring. At the October 5, 2004 Action Team meeting, WDFW will provide a proposal for funding Fish Contaminant Monitoring. This may involve revisions to other elements of WDFW's proposal and/or suggestion of a variety of funding sources for the fish contaminant monitoring efforts.

****Notes for Natural Resources**: A proposed adjustment of $396,200 for Aquatic reserves management plans under DNR-05 is included in Proposed Enhancements but is not recommended as a proviso and is not included in Total Proposed Proviso Funding.

Table 2. Proposed Budget by Agency and Budget Code for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total
DEPARTMENT OF AGRICULTURE					
WSDA-01	Watershed technical assistance	$74,000			$74,000
Total	**Department of Agriculture**	**$74,000**			**$74,000**
DEPARTMENT OF COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT					
CTED-01	Technical assistance for local planning	$123,000			$123,000
Total	**Office of Community Development**	**$123,000**			**$123,000**
CONSERVATION COMMISSION					
CC-01	Technical assistance and funding for Puget Sound Conservation Districts for their water quality projects	$494,000			$494,000
CC-02	Implementation of Puget Sound Conservation District water quality projects	$840,000			$840,000
Total	**Conservation Commission**	**$1,334,000**			**$1,334,000**
DEPARTMENT OF ECOLOGY					
DOE-01	Ambient monitoring and laboratory certification	$3,742,716		$322,976	$4,065,692
DOE-02	Wastewater discharge permits	$3,826,188			$3,826,188
DOE-03	Watershed assistance		$3,904,000		$3,904,000
DOE-04	Nonpoint source pollution	$1,281,847			$1,281,847
DOE-06	Stormwater program	$1,400,000	$391,072		$1,791,072
DOE-07	Contaminated sediments and dredging	$1,190,000			$1,190,000
DOE-08	Wetland protection and restoration	$524,690			$524,690
DOE-09	Oil spills prevention and response	$705,000	$4,276,000		$4,981,000
DOE-10	Aquatic Nuisance Species		$89,903		$89,903
DOE-11	Shoreline Management Act		$2,245,000		$2,245,000
DOE-12	Northwest Straits Commission		$1,500,000		$1,500,000
DOE-13	Persistent Bioaccumulative Toxin (PBT) Strategy		$150,000		$150,000
DOE-14	Technical Resources for Engineering Efficiency (TREE)		$270,000		$270,000
Total	**Department of Ecology**	**$12,670,441**	**$12,825,975**	**$322,976**	**$25,819,392**
DEPARTMENT OF FISH AND WILDLIFE					
DFW-01	Long-term monitoring of Puget Sound marine birds and waterfowl	$175,000			$175,000
DFW-02	Soundwide technical assistance for water quality and habitat	$150,000			$150,000
DFW-03	Local watershed technical assistance for water quality and habitat	$650,000			$650,000
DFW-04	Aquatic nuisance species and ballast water program	$170,000			$170,000
DFW-05	Puget Sound Marine Fish Recovery	$680,000			$680,000
DFW-06	Deschutes Estuary Feasibility Study - Early Action Project	$250,000			$250,000

Table 2. Proposed Budget by Agency and Budget Code for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total
DFW-07	Orca Conservation, Recovery and Monitoring			$300,000	$300,000
DFW-08	Forage Fish Spawning Habitat Inventory Project	$350,000			$350,000
DFW-09	Census of Burrow-nesting Seabirds in Puget Sound	$150,000			$150,000
DFW-10	SalmonScape Application for Forage Fish	$30,000			$30,000
DFW-11	Burlington Northern Railroad - Early Action Projects Feasibility	$100,000			$100,000
DFW-12	Puget Sound Nearshore Restoration Project	$108,427		$291,573	$400,000
DFW-13	Puget Sound technical assistance: Environmental Engineering			$170,000	$170,000
DFW-14	Ecoregional Assessment Implementation - Assistance to Counties			$400,000	$400,000
DFW-15	Puget Sound Marine Fish Recovery			$800,000	$800,000
DFW-16	Fish Contaminant Monitoring	Placeholder*			
Total	**Department of Fish and Wildlife**	**$3,113,427**		**$1,961,573**	**$5,075,000**

**At the October 5, 2004 Action Team meeting, WDFW will provide a proposal for funding Fish Contaminant Monitoring. This may involve revisions to other elements of WDFW's proposal and/or suggestion of a variety of funding sources for the fish contaminant monitoring efforts. The amounts shown in this version of the plan reflect a shift of $300,000 for Orca Conservation, Recovery and Monitoring from Carry Forward Proviso Funds to Proposed Enhancements. The total amounts shown for WDFW's Carry Forward Proviso Funds include a "placeholder" of $300,000 for fish contaminant monitoring.

DEPARTMENT OF HEALTH					
DOH-01	Monitoring, data management and reporting	$464,800		$3,050	$467,850
DOH-02	Protection and restoration of shellfish beds	$936,300		$17,000	$953,300
DOH-03	Recreational shellfish program		$676,000	$13,000	$689,000
DOH-04	On-site sewage management	$1,273,900		$30,878	$1,304,778
Total	**Department of Health**	**$2,675,000**	**$676,000**	**$63,928**	**$3,414,928**
DEPARTMENT OF NATURAL RESOURCES					
DNR-01	Nearshore habitat monitoring	$1,306,950		$345,100	$1,652,050
DNR-02	Management of wetlands	$36,000			$36,000
DNR-05	Aquatic Reserves management			$396,200	$396,200
Total	**Department of Natural Resources**	**$1,342,950**		**$741,300**	**$2,084,250**
STATE PARKS AND RECREATION COMMISSION					
PRC-01	Marinas and recreational boating facility grants		$450,000		$450,000
PRC-02	Boater education and public involvement	$191,000	$75,000		$266,000
Total	**State Parks and Recreation Commission**	**$191,000**	**$525,000**		**$716,000**

Table 2. Proposed Budget by Agency and Budget Code for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total
DEPARTMENT OF TRANSPORTATION					
DOT-01	Stormwater		To be provided		
DOT-02	Contaminated Sediments		$381,000		$381,000
DOT-03	Wetlands		$19,000,000		$19,000,000
DOT-04	Habitat		$7,246,400		$7,246,400
Total	**Department of Transportation**		**$26,627,400**		**$26,627,400**
UNIVERSITY OF WASHINGTON					
UW-01	Water quality agents	$300,000		$30,000	$330,000
UW-02	Oil spill prevention education (Ecology pass through)	$170,000		$17,000	$187,000
Total	**University of Washington**	**$470,000**		**$47,000**	**$517,000**
WASHINGTON STATE UNIVERSITY					
WSU-01	Water quality agents	$331,000		$89,000	$420,000
Total	**Washington State University**	**$331,000**		**$89,000**	**$420,000**
PUGET SOUND ACTION TEAM					
PSAT-01	Coordinate the work of the Puget Sound Action Team Partnership and Council for Puget Sound conservation and recovery	$507,100			$507,100
PSAT-02	Provide technical assistance and policy guidance to achieve progress on the Parnership's environmental priorities	$1,432,400		$25,000	$1,457,400
PSAT-03	Conduct outreach and provide technical assistance to Puget Sound communities to achieve progress on environmental priorities	$1,320,800			$1,320,800
PSAT-04	Inform and engage people to make progress on environmenta priorities	$712,300			$712,300
PSAT-05	Coordinate, communicate and facilitate the use of Puget Sound science	$362,800			$362,800
PSAT-06	Distribute Public Involvement and Education (PIE) funding for community-based education and involvement	$700,000		$300,000	$1,000,000
PSAT-07	Develop and provide funds for corrective actions to address Hood Canal's dissolved oxygen problems			$1,000,000	$1,000,000
Total	**Puget Sound Action Team**	**$5,035,400**		**$1,325,000**	**$6,360,400**
Total	**All Agencies. All Funds**	**$27,360,218**	**$40,654,375**	**$4,550,777**	**$72,565,370**

Table 3. Proposed Detailed Budget by Agency and Fund Source for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total	Fund
DEPARTMENT OF AGRICULTURE						
WSDA-01	Watershed Technical Assistance	$74,000			$74,000	GF-S
Total	**Department of Agriculture**	**$74,000**			**$74,000**	**GF-S**
DEPARTMENT OF COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT						
CTED-01	Technical Assistance for local planning	$123,000			$123,000	GF-S
Total	**Office of Community Development**	**$123,000**			**$123,000**	**GF-S**
CONSERVATION COMMISSION						
CC-01	Technical assistance and funding for Puget Sound Conservation Districts for their water quality projects	$494,000			$494,000	GF-S
CC-02	Implementation of Puget Sound Conservation District water quality projects.	$840,000			$840,000	WQA Capital
Total	**Conservation Commission**	**$1,334,000**			**$1,334,000**	
DEPARTMENT OF ECOLOGY						
DOE-01	Ambient monitoring and laboratory certification	$3,280,886			$3,280,886	GF-S
		$217,830			$217,830	WQA
		$244,000			$244,000	GF-F
				$322,976	$322,976	WQA
DOE-02	Wastewater discharge permits	$77,968			$77,968	GF-S
		$3,748,220			$3,748,220	WQPF
DOE-03	Watershed assistance		$3,904,000		$3,904,000	WQA
DOE-04	Nonpoint source pollution	$970,150			$970,150	GF-S
		$311,697			$311,697	GF-S
DOE-06	Stormwater program	$1,400,000	$391,072		$1,791,072	STCA
DOE-07	Contaminated sediments and dredging	$1,181,000			$1,181,000	STCA
		$9,000			$9,000	GF-F
DOE-08	Wetland protection and restoration	$411,690			$411,690	GF-S
		$113,000			$113,000	GF-F
DOE-09	Oil spills prevention and response	$705,000	$800,000		$1,505,000	OSPA
			$600,000		$600,000	STCA
			$2,876,000		$2,876,000	VRA
DOE-10	Aquatic Nuisance Species		$45,053		$45,053	FAWA
			$44,850		$44,850	STCA
DOE-11	Shoreline management act		$1,927,000		$1,927,000	GF-S
			$318,000		$318,000	GF-F
DOE-12	Northwest Straits Commission		$1,500,000		$1,500,000	GF-F
DOE-13	Persistent Bioaccumulative Toxin (PBT) Strategy		$150,000		$150,000	STCA
DOE-14	Technical Resources for Engineering Efficiency (TREE)		$170,000		$170,000	HWAA
			$100,000		$100,000	STCA

Table 3. Proposed Detailed Budget by Agency and Fund Source for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total	Fund
Subtotal	Department of Ecology				$6,979,391	GF-S
Subtotal	Department of Ecology				$2,184,000	GF-F
Subtotal	Department of Ecology				$1,505,000	OSPA
Subtotal	Department of Ecology				$4,444,806	WQA
Subtotal	Department of Ecology				$45,053	FAWA
Subtotal	Department of Ecology				$3,866,922	STCA
Subtotal	Department of Ecology				$170,000	HWAA
Subtotal	Department of Ecology				$2,876,000	VRA
Subtotal	Department of Ecology				$3,748,220	WQPF
Total	**Department of Ecology**	**$12,670,441**	**$12,825,975**	**$322,976**	**$25,819,392**	
DEPARTMENT OF FISH AND WILDLIFE						
DFW-01	Long-term monitoring of Puget Sound marine birds and waterfowl	$175,000			$175,000	GF-S
DFW-02	Soundwide technical assistance for water quality and habitat	$150,000			$150,000	GF-S
DFW-03	Local watershed technical assistance for water quality and habitat	$650,000			$650,000	GF-S
DFW-04	Aquatic nuisance species and ballast water program	$170,000			$170,000	GF-S
DFW-05	Puget Sound Marine Fish Recovery	$680,000			$680,000	GF-S
DFW-06	Deschutes Estuary Feasibility Study - Early Action Project	$250,000			$250,000	GF-S
DFW-07	Orca Conservation, Recovery and Monitoring			$300,000	$300,000	GF-S
DFW-08	Forage Fish Spawning Habitat Inventory Project	$350,000			$350,000	GF-S
DFW-09	Census of Burrow-nesting Seabirds in Puget Sound	$150,000			$150,000	GF-S
DFW-10	SalmonScape Application for Forage Fish	$30,000			$30,000	GF-S
DFW-11	Burlington Northern Railroad - Early Action Projects Feasibility	$100,000			$100,000	GF-S
DFW-12	Puget Sound Nearshore Restoration Project	$108,427		$291,573	$400,000	GF-S
DFW-13	Puget Sound Technical Assistance: Environmental Engineering			$170,000	$170,000	GF-S
DFW-14	Ecoregional Assessment Implementation - Assistance to Counties			$400,000	$400,000	GF-S
DFW-15	Puget Sound Marine Fish Recovery			$800,000	$800,000	GF-S
DFW-16	Fish Contaminant Monitoring	Placeholder*				
Total	**Department of Fish and Wildlife**	**$3,113,427**		**$1,961,573**	**$5,075,000**	**GF-S**

At the October 5, 2004 Action Team meeting, WDFW will provide a proposal for funding Fish Contaminant Monitoring. This may involve revisions to other elements of WDFW's proposal and/or suggestion of a variety of funding sources for the fish contaminant monitoring efforts. The amounts shown in this version of the plan reflect a shift of $300,000 for Orca Conservation, Recovery and Monitoring from Carry Forward Proviso Funds to Proposed Enhancements. The total amounts shown for WDFW's Carry Forward Proviso Funds include a "placeholder" amount of $300,000 for fish contaminant monitoring.

Table 3. Proposed Detailed Budget by Agency and Fund Source for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total	Fund
DEPARTMENT OF HEALTH						
DOH-01	Monitoring, data management and reporting	$464,800		$3,050	$467,850	GF-S
DOH-02	Protection and restoration of shellfish beds	$936,300		$17,000	$953,300	GF-S
DOH-03	Recreational shellfish program		$676,000	$13,000	$689,000	GF-P/L
DOH-04	On-site sewage management	$1,273,900		$30,878	$1,304,778	GF-S
Subtotal	Department of Health				$2,725,928	GF-S
Subtotal	Department of Health				$689,000	GF-P/L
Total	**Department of Health**	**$2,675,000**	**$676,000**	**$63,928**	**$3,414,928**	
DEPARTMENT OF NATURAL RESOURCES						
DNR-01	Nearshore habitat monitoring	$1,306,950		$345,100	$1,652,050	ALEA
DNR-02	Management of wetlands	$36,000			$36,000	GF-S
DNR-03	Puget Sound Dredged Disposal Analysis (No work plan funding proposed)					
DNR-05	Aquatic Reserves management			$396,200	$396,200	ALEA
Subtotal	Department of Natural Resources				$2,048,250	ALEA
Subtotal	Department of Natural Resources				$36,000	GF-S
Total	**Department of Natural Resources**	**$1,342,950**		**$741,300**	**$2,084,250**	
STATE PARKS AND RECREATION COMMISSION						
PRC-01	Marinas and recreational boating facility grants		$450,000		$450,000	GF-F Capital
PRC-02	Boater education and public involvement	$191,000			$191,000	ALEA
			$75,000		$75,000	GF-F
Subtotal	State Parks and Recreation Commission				$191,000	ALEA
Subtotal	State Parks and Recreation Commission				$75,000	GF-F
Subtotal	State Parks and Recreation Commission				$450,000	GF-F Capital
Total	**State Parks and Recreation Commission**	**$191,000**	**$525,000**		**$716,000**	
DEPARTMENT OF TRANSPORTATION						
DOT-01	Stormwater		To be provided			MVF
DOT-02	Contaminated Sediments		$381,000		$381,000	MVF
DOT-03	Wetlands		$19,000,000		$19,000,000	MVF
DOT-04	Habitat		$7,246,400		$7,246,400	MVF
Total	**Department of Transportation**		**$26,627,400**		**$26,627,400**	
UNIVERSITY OF WASHINGTON						
UW-01	Water quality agents	$300,000		$30,000	$330,000	GF-S
UW-02	Oil spill prevention education (Ecology pass through)	$170,000		$17,000	$187,000	OSPA
Total	**University of Washington**	**$470,000**		**$47,000**	**$517,000**	
WASHINGTON STATE UNIVERSITY						
WSU-01	Water quality agents	$331,000		$89,000	$420,000	GF-S
Total	**Washington State University**	**$331,000**		**$89,000**	**$420,000**	**GF-S**

Table 3. Proposed Detailed Budget by Agency and Fund Source for the 2005-2007 Puget Sound Conservation and Recovery Plan

Budget Code	Title	Carry Forward Levels of Proviso Funding	Other Continuing Funding	Proposed Enhancements	Total	Fund
PUGET SOUND WATER QUALITY ACTION TEAM						
PSAT-01	Coordinate the work of the Puget Sound Action Team Partnership and Council for Puget Sound conservation and recovery	$373,100			$373,100	WQA
		$134,000			$134,000	GF-F
PSAT-02	Provide technical assistance and policy guidance to achieve progress on the Parnership's environmental priorities	$1,053,900			$1,053,900	WQA
		$378,500			$378,500	GF-F
				$25,000	$25,000	GF-S
PSAT-03	Conduct outreach and provide technical assistance to Puget Sound communities to achieve progress on environmental priorities	$971,800			$971,800	WQA
		$349,000			$349,000	GF-F
PSAT-04	Inform and engage people to make progress on environmenta priorities	$524,100			$524,100	WQA
		$188,200			$188,200	GF-F
PSAT-05	Coordinate, communicate and facilitate the use of Puget Sound science	$266,900			$266,900	WQA
		$95,900			$95,900	GF-F
PSAT-06	Distribute Public Involvement and Education (PIE) funding for community-based education and involvement	$700,000		$300,000	$1,000,000	WQA
PSAT-07	Develop and provide funds for corrective actions to address Hood Canal's dissolved oxygen problems			$500,000	$500,000	GF-S
				$500,000	$500,000	GF-F
Subtotal	Puget Sound Water Quality Action Team				$1,645,600	GF-F
Subtotal	Puget Sound Water Quality Action Team				$4,189,800	WQA
Subtotal	Puget Sound Water Quality Action Team				$525,000	GF-S
Total	**Puget Sound Water Quality Action Team**	**$5,035,400**		**$1,325,000**	**$6,360,400**	
Subtotal	All Agencies GF-S	$12,198,818	$1,927,000	$2,656,501	$16,782,319	
Subtotal	All Agencies GF-F	$1,511,600	$1,893,000	$500,000	$3,904,600	
Subtotal	All Agencies GF-F Capital		$450,000		$450,000	
Subtotal	All Agencies ALEA	$1,497,950		$741,300	$2,239,250	
Subtotal	All Agencies WQPF	$3,748,220			$3,748,220	
Subtotal	All Agencies MVF-Federal		$26,627,400		$26,627,400	
Subtotal	All Agencies STCA	$2,581,000	$1,285,922		$3,866,922	
Subtotal	All Agencies OSPA	$875,000	$800,000	$17,000	$1,692,000	
Subtotal	All Agencies WQA	$4,107,630	$3,904,000	$622,976	$8,634,606	
Subtotal	All Agencies FAWA		$45,053		$45,053	
Subtotal	All Agencies VRA		$2,876,000		$2,876,000	
Subtotal	All Agencies HWAA		$170,000		$170,000	
Subtotal	All Agencies GF-P/L		$676,000	$13,000	$689,000	
Subtotal	All Agencies WQA Capital	$840,000			$840,000	
Total	**All Agencies. All Funds**	**$27,360,218**	**$40,654,375**	**$4,550,777**	**$72,565,370**	

Table 4a: Puget Sound 2005-2007 Enhancement Requests by Funding Source

The Puget Sound Council recommended the ranking shown below for enhancement requests from the state General Fund and the Water Quality Account. The Puget Sound Action Team will discuss the ranking for possible approval on October 5, 2004.

Funding Source	Agency	Budget Code	Activity	Amount (dollars)	Puget Sound Council Ranking
General Fund – State	Fish and Wildlife	DFW-07	Orca Conservation, Recovery, and Monitoring	300,000	4
		DFW-12	Puget Sound Nearshore Restoration Project	291,573	5
		DFW-13	Puget Sound Technical Assistance: Environmental Engineering	170,000	6
		DFW-14	Ecoregional Assessment Implementation – Assistance to counties	400,000	7
		DFW-15	Puget Sound Marine Fish Recovery	800,000	8
	Puget Sound Action Team Staff	PSAT-02	Ballast Water Committee staff support	25,000	9
		PSAT-07	Hood Canal Corrective Action Fund to address low dissolved oxygen problems.	500,000	1
	Washington Sea Grant	UW-01	Water Quality Field Agents – Covers cost of inflation for two field agents.	30,000	2
	WSU Extension	WSU-01	Water Quality Field Agents – Covers cost of inflation for three field agents.	89,000	2
		Total General Fund State		**2,605,573**	
Water Quality Account – Operating	Puget Sound Action Team	PSAT-06	Public Involvement and Education (PIE) fund increase for community-based education projects	300,000	3
		Total Water Quality Account		**300,000**	

Funding Source	Agency	Budget Code	Activity	Amount (dollars)	Puget Sound Council Ranking
Aquatic Lands Enhancement Account	Natural Resources	DNR-01	Nearshore Habitat Monitoring – Expand eelgrass monitoring	345,100	Not ranked
		DNR-05 Non proviso	Aquatic Reserves Management – Funding to implement management plans	396,200	Not ranked
	Total Aquatic Lands Enhancement Account			**741,300**	
General Fund-Federal	Puget Sound Action Team	PSAT-07	Hood Canal Corrective Actions to address low dissolved oxygen problems.	**500,000**	Not ranked
Oil Spill Prevention Account	Washington Sea Grant Program	UW-02	Oil Spill Prevention Education –	**17,000**	Not ranked
			Total All Funding Sources	**4,163,873**	

Note: Enhancement requests listed above do not include:

1) Statewide enhancement requests (see Table 4b),
2) The adjustments provided by the Department of Health of $63,928 for costs incurred for relocation; and
3) Ecology shift in funding for ambient monitoring and laboratory certification of $322,976 to the Water Quality Account due to the loss of the State Drought Preparedness Account.

Table 4b: 2005-2007 Statewide Enhancement Requests with Benefits to Puget Sound

The enhancement requests listed below are submitted voluntarily by agencies for statewide programs that support the priorities and achieve the results of this work plan. These enhancement requests are not ranked and are not included in the Puget Sound work plan budget (shown in Tables 1-3).

Agency	Budget Code	Proposed Activity	Budget Enhancement	Funding Source
Conservation Commission		Livestock Nutrient Management Tech Assistance/Project Design	762,640	WQA-Operating
		Livestock Nutrient Management Landowner Cost-share	3,007,600	WQA-Capital
		Conservation Reserve Enhancement Program Technical Assistance	100,000	GF-S
		Conservation Reserve Enhancement Program Implementation	4,000,000	SBCA-057
		Water Quality Implementation Grants to Conservation Districts	500,000	WQA-Capital
Ecology	DOE-06	Stormwater Program – Implement changes in municipal and industrial stormwater permits in accordance with federal regulations (Phase II permits)	198,000	General Fund- State
			3,621,000	Water Quality – Private Fund
	DOE-13	PBT Strategy – Reduce persistent bio-accumulative toxins (PBTs) in the environment.	876,000	STCA
	DOE-11	Shoreline Management Act – Funding for local government grants for updating Shoreline Master Programs.	1,391,000	GF-S
Natural Resources	DNR-04	Seagrass management plan	369,200	ALEA
Total statewide enhancement requests			**$14,825,440**	